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Waste Industry Experts

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Mr. Ethan Brown
Division of Waste Management/Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

**RE: Notification of NC-2L Groundwater Standard Exceedances
Granville County – Closed Butner Landfill
Permit No. 39-02
JEI Project No. 660.06, Task 24**

Dear Mr. Brown:

On behalf of Granville County, Joyce Engineering, Inc. is submitting this notification of exceedances of 15A-NCAC-2L (NC-2L) groundwater standards at the Granville County – Butner Landfill, Permit No. 39-02 in accordance with Title 15A, Chapter 13, Subchapter 13B, Section .1634 (g) of the North Carolina Solid Waste Management Regulations. The second semiannual sampling event of 2007 at the Butner Landfill took place on December 18-19, 2007. Samples were sent to Pace Analytical Services Inc., of Ashville, North Carolina. The results indicate exceedances of NC-2L standards for 1,4-dichlorobenzene in monitoring wells MW-2R and MW-3R, and benzene in MW-2R; however these detections are consistent with previous sampling events. Cobalt was detected in MW-5, and vanadium in MW-4 at concentrations above their respective Groundwater Protection Standards (GPS), but these detections do not represent statistically significant increases above background.

Other organic compounds detected in one or more monitoring wells during the December 2007 event include chlorobenzene, chloroethane, 1,2-dichlorobenzene, 1,1-dichloroethane, toluene, and xylenes; however, none of these were above their respective NC-2L standards. Other inorganic constituents detected at quantifiable concentrations during the December 2007 event include barium, nickel, selenium, and tin.

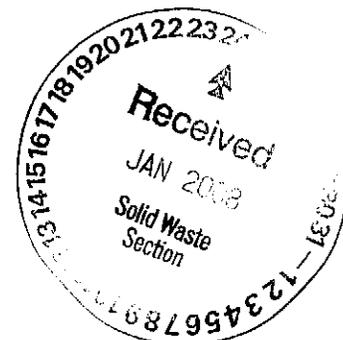
These results are consistent with previous results for this facility; however, a complete data quality review has not been completed, so these results are considered preliminary. Summaries of detected concentrations and statistical analyses are attached. A complete groundwater monitoring and statistical analysis report will follow. If you have any questions or need additional information, please feel free to contact me or Michelle Brown at (336) 323-0092.

Sincerely,
JOYCE ENGINEERING, INC.

Van Burbach, PG
Senior Project Hydrogeologist

Attachment

Copy: Brian Alligood, Granville County
Jason Falls, Granville County
JEI File



**Butner Landfill - Granville Co.
Detected Inorganic Constituents - December 2007**

Parameter	SWSL	NC2L	MW1R	MW2R	MW3R	MW4	MW5	MW6	NES-1	SW-1	SW-2	Blanks
Arsenic	10	50	ND	4.1 J	ND	ND	ND	ND	ND	ND	ND	ND
Barium	100	2000	2.8 B	99.2	50 B	1.4 J	49.6 B	1.7 B	87.8	52.6 B	149	11.5
Chromium	10	50	ND	2.0 B	ND	ND	ND	ND	1.1 B	2.2 B	2.6 B	1.4 J
Cobalt	10	70*	2.5 B	ND	ND	2.0 B	103	2.6 B	8.0 B	4.2 B	1.2 B	1.8 J
Copper	10	1000	2.0 B	ND	8.6 B	3.8 B	7.0 B	0.73 B	5.8 B	5.3 B	ND	9.7
Nickel	50	100	ND	83.4	23.7	11.0	18.3	ND	11.4	6.0	31.5	ND
Selenium	10	50	ND	11.5	ND	ND	ND	ND	ND	ND	ND	ND
Silver	10	17.5	ND	0.57 J	0.60 J	0.55 J	ND	0.33 J	ND	ND	0.34 J	ND
Thallium	5.5	0.28*	ND	4.0 J	ND	ND	ND	ND	ND	3.6 J	ND	ND
Tin	100	-	ND	33.6	7.4	ND	ND	ND	ND	-	-	ND
Vanadium	25	3.5*	2.2 B	2.2 B	ND	15.7	3.0 B	1.2 B	4.0 J	3.3 J	1.4 B	0.62 J
Zinc	10	1050	4.3 B	14.3 B	6.3 B	ND	ND	ND	2.4 B	24.6 B	ND	98.3

* = No NC2L Std. Listed - Value is NC GPS.

J = Estimated concentration below laboratory quantitation limit.

B = Blank-qualified detection.

Shaded = Result > SWSL

Bold = Result > NC-2L

**Butner Landfill - Granville Co.
Detected Organic Constituents - December 2007**

Parameter	SWSL	NC2L	MW1R	MW2R	MW3R	MW4	MW5	MW6	NES-1	SW1	SW2	Blank
Acetone	100	700	ND	ND	ND	ND	ND	ND	ND	12.7 B	ND	4.5 J
Benzene	1	1	ND	1.8	0.48 J	0.26 J	ND	ND	ND	ND	ND	ND
Bromodichloromethane	1	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.1
Chlorobenzene	3	50	ND	17.3	16.9	4.7	ND	ND	ND	ND	ND	ND
Chloroethane	10	2800	ND	1.9	1.9	1.5	ND	ND	ND	ND	ND	ND
Chloroform	5	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	54.7
Dibromomethane	10	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.2
1,2-Dichlorobenzene	5	24	ND	1.6	2.0	0.37 J	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	1	1.4	ND	5.0	2.7	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	70	ND	ND	ND	0.57 J	ND	ND	ND	ND	ND	ND
Toluene	1	1000	ND	0.51 J	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	4	530	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND

J = Estimated concentration below laboratory quantitation limit.
B = Blank-qualified detection.

Shaded = Result > SWSL
Bold = Result > NC-2L

**Butner Landfill - Granville Co.
Summary of Statistical Analyses
December 2007 Sampling Event**

Analyte	Data Distribution	Statistical Method used to Establish Background	Background (µg/L)	NC2L (*GPS) (µg/L)	SSI above Background	Above NC2L or GPS
Barium	79% Truncated	Nonparametric Prediction Limit	200	2000	None	None
Cobalt	64% Truncated	Nonparametric Prediction Limit	130	70 *	None	MW-5
Copper	# n/a	# n/a	# n/a	1000	None	None
Nickel	97% Truncated	Upper Poisson Prediction Limit	173	100	None	None
Silver	# n/a	# n/a	# n/a	17.5	None	None
Selenium	100% Truncated	Upper Poisson Prediction Limit	71	50	None	None
Tin	100% Truncated	Upper Poisson Prediction Limit	337	n/e	None	None
Vanadium	68% Truncated	Nonparametric Prediction Limit	450	3.5 *	None	MW-4
Zinc	# n/a	# n/a	# n/a	1050	None	None
Benzene	n/a	Compare Directly to SWSL	1	1	MW-2R	MW-2R
Chlorobenzene	n/a	Compare Directly to SWSL	3	50	MW-2R, MW-3R, MW-4	None
1,4-Dichlorobenzene	n/a	Compare Directly to SWSL	1	1	MW-2R, MW-3R	MW-2R, MW-3R
1,2-Dichlorobenzene	n/a	Compare Directly to SWSL	5	24	None	None
1,1-Dichloroethane	n/a	Compare Directly to SWSL	5	70	MW-2R, MW-3R	None
Xylenes	n/a	Compare Directly to SWSL	4	530	None	None

Notes:

SSI = Statistically Significant Increase

NC2L = 15A NCAC 2L Groundwater Standard

GPS = Groundwater Protection Standard (indicated by * for constituents with no NC2L)

n/a = not applicable

n/e = No NC2L or GPS not established

µg/L = micrograms per liter = parts per billion

Statistical analyses not required for constituents with no quantified (and non-blank-qualified) down-gradient detections.